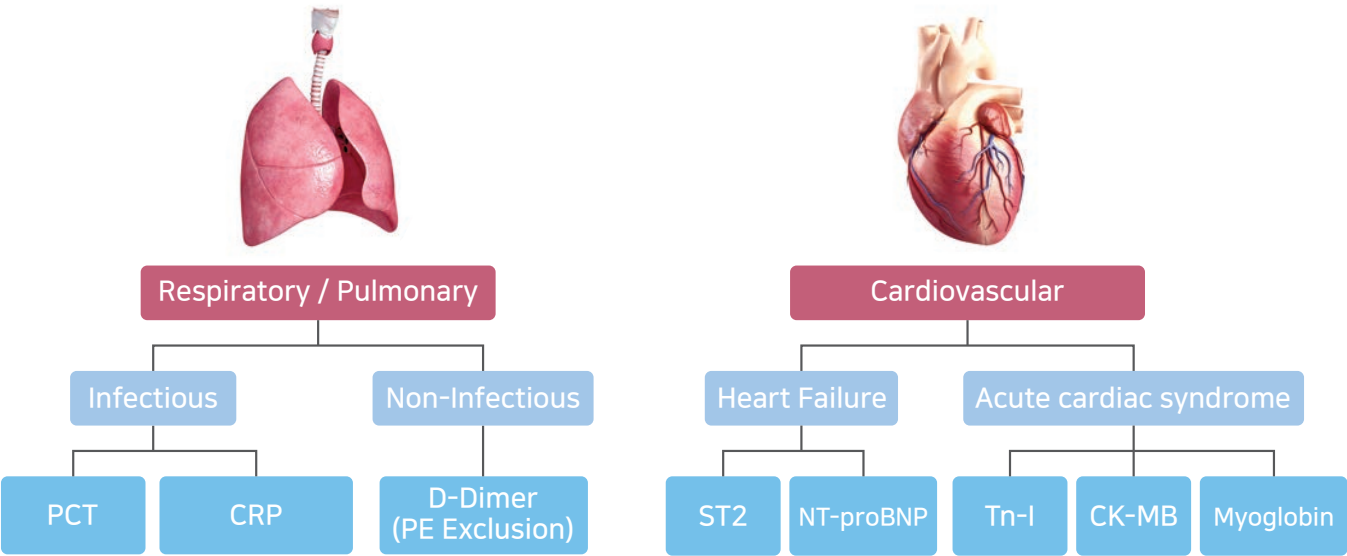


Get time on your side with Boditech

Chest Pain - Shortness of Breath - Fever - Cough



> Patient management

- Results are available within 15 minutes, helping to improve efficiency
- Being able to detect and follow up a patient health status is crucial for the patient management
- Appropriate treatment can be given without delay
- Selecting and monitoring cardiac/heart failure therapy (drugs, devices...) with biochemical biomarker(s) is personalized medicine

> Patient outcomes

- Rapid diagnostics allows appropriate treatment to be initiated immediately
- Early diagnosis and treatment reassure patients and reduce anxiety associated with uncertainty. Follow up to the therapy is possible and detectable

> Cost effectiveness

- Early therapeutic initiation and regular monitoring can help reduce complications and improve cost efficiency ¹⁷
- Avoid unnecessary referrals to secondary care will save the practice money.
- Improved rule-out process and thereby help to substantially reduce the need for cardiac stress testing and time to discharge. Total costs will be also reduced. Total cost will therefore be reduced.

> Easy to use

- One step walk away system available
- All in one cartridge
- User-friendly screen
- Connectable to LIS for data storage

REFERENCE

1. K. Thygesen, J. S. Alpert, A. S. Jaffe, B. R. Chaitman, J. J. Bax, D. A. Morrow, H. D. White, Fourth universal definition of myocardial infarction (2018), European Heart Journal (2019) 40, 237–269 doi:10.1093/eurheartj/ehy462
2. Pollack C, et al. 2002 update to the ACC/AHA guidelines for the management of patients with unstable angina and non-ST-segment elevation myocardial infarction: implications for emergency department practice. Ann Emerg Med 2003; 41: 355–369.
3. R. Body M. Almashali G. McDowell, Bedside Evaluation of Sensitive Troponin (BEST) study group, Rapid acute myocardial infarction rule-out using the limit of detection of a point of care troponin assay: early results of the Bedside Evaluation of Sensitive Troponin (BEST) study , European Heart Journal, Volume 38, Issue suppl_1, August 2017, ehx502.P1124
4. Laura C. van Vark, Ivonne Lesman-Leegte, Sara J. Baart, Douwe Postmus, Yigal M. Pinto, Joke G. Orsel, B. Daan Westenbrink Hans P. Brunner-la Rocca, Addy J.M. van Miltenburg, Eric Boersma, Hans L. Hillege, K. Martijn Akkerhuis, for the TRIUMPH Investigators, Prognostic Value of Serial ST2 Measurements in Patients With Acute Heart Failure, Journal of the American College of Cardiology, VOL. 70, NO. 19, 2017
5. Alberto Aimo, Michele Emdin and Alan S. Maisel, Sacubitril/Valsartan, Cardiac Fibrosis, and Remodeling in Heart Failure, Journal of the American College of Cardiology, Volume 73, Issue 23, June 2019
6. Brown M, et al. An emergency department guideline for the diagnosis of pulmonary embolism: an outcome study. Acad Emerg Med 2005; 12: 20–25.
7. Diamond S, et al. Use of D-dimer to aid in excluding deep venous thrombosis in ambulatory patients. Am J Surg 2005; 189: 23–26.
8. S.J. Kim M.H. Kim S.Y. Choi K.M. Lee V.L. Serebruany J.K. Kim S.W. Kim, Validation of acute pulmonary thromboembolism discrimination from myocardial infarction by using Troponin I and D-dimer, European Heart Journal, Volume 38, Issue suppl_1, August 2017, ehx504.P3508
9. Perrier A, et al. Cost-effectiveness analysis of diagnostic strategies for suspected pulmonary embolism including helical computed tomography. Am J Respir Crit Care Med 2003; 167: 39–44.
10. Hobbs FO, et al. Reliability of N-terminal pro-brain natriuretic peptide assay in diagnosis of heart failure: cohort study in representative and high risk community populations. BMJ 2002; 324: 1498.
11. SIGN. Scottish Intercollegiate Guidelines Network. <http://www.sign.ac.uk/guidelines/published/index.html>
12. Hobbs FO, et al. Reliability of N-terminal proBNP assay in diagnosis of left ventricular systolic dysfunction within representative and high risk populations. Heart 2004; 90: 866–870.
13. Wu A, et al. National Academy of Clinical Biochemistry Standards of Laboratory Practice: Recommendations for the Use of Cardiac Markers in Coronary Artery Diseases. Clin Chem 1999; 45: 1104–1121.
14. C. Pirlet L.A. Pierard V. Legrand O. Gach, Ratio of high-sensitivity troponin to CK-MB in takotsubo syndrome, European Heart Journal, Volume 38, Issue suppl_1, August 2017, ehx504.P3387
15. Mockel M, et al. Validation of NACB and IFCC guidelines for the use of cardiac markers for early diagnosis and risk assessment in patients with acute coronary syndromes. Clin Chim Acta 2001; 303: 167–179.
16. F Fracassi M Russo V Vetrugno F Vergni F Rettura G Niccoli F Crea, Prediction of recurrent acute coronary syndromes: beyond C-reactive protein. An Optical Coherence Tomography study, European Heart Journal, Volume 39, Issue suppl_1, August 2018, ehx565.P2775
17. E.A. Amsterdam, N.K. Wenger, R.G. Brindis, D.E. Casey Jr, T.G. Ganiats, D.R. Holmes Jr, A.S. Jaffe, H. Jneid, R.F. Kelly, M.C. Kontos, G.N. Levine, P.R. Liebson, D. Mukherjee, E.D. Peterson, M.S. Sabatine, R.W. Smalling, S.J. Zieman, 2014 AHA/ACC Guideline for the Management of Patients With Non-ST-Elevation Acute Coronary Syndromes, Circulation. 2014;130:e344–e426



43, Geodudanji 1-gil, Dongnae-myeon,
Chuncheon-si, Gangwon-do, 24398, Korea
Tel: +82-33-243-1400, Fax: +82-33-243-9373
sales@boditech.co.kr
www.boditech.co.kr

EN-000001 Emergency diagnosis 20190814_01



We redefine emergency
Testing procedure

Emergency diagnosis,
on the spot

Tn-I / ST2 / NT-proBNP / D-Dimer /
CK-MB / Myoglobin / CRP / PCT

Find out more on

www.boditech.co.kr



Boditech Emergency Panel

A flexible platform to answer your needs

| | | ichromax™ | | | AFIAS | | |
|-----------------|--|-------------------------|-------------------|-------------|-------------------------|-------------------|-------------|
| Parameter | Clinical utility | Reaction time (minutes) | Measuring range | Sample type | Reaction time (minutes) | Measuring range | Sample type |
| Troponin I | Diagnosis of acute coronary syndrome and myocardial infarction | 12 | 0.1 – 50 ng/mL | P/S | 12 | 0.01 – 15 ng/mL | WB/S/P |
| Troponin I plus | | 12 | 0.01 – 15 ng/mL | WB/S/P | 12 | | |
| ST2 | Associated with cardiac remodeling and fibrosis | 12 | 3.1~200 ng/mL | WB/S/P | 12 | 3.1~200 ng/mL | WB/S/P |
| D-Dimer | Exclusion of deep vein thrombosis (DVT) and pulmonary embolism. | 12 | 50 – 10,000 ng/mL | WB/P | 12 | 50 – 10,000 ng/mL | WB/P |
| NT-proBNP* | Diagnosis and assessment of congestive heart failure. Risk stratification in acute coronary syndrome | 12 | 10 – 30,000 pg/mL | WB/S/P | 12 | 10 – 30,000 pg/mL | WB/S/P |
| CK-MB | Diagnosis of acute coronary syndrome and myocardial infarction, assessment of re-infarction | 12 | 3 – 100 ng/mL | WB/S/P | 12 | 3 – 100 ng/mL | WB/S/P |
| Myoglobin | Early marker of myocardial infarction | 12 | 5 – 500 ng/mL | WB/S/P | 12 | 2 – 500 ng/mL | WB/S/P |
| hsCRP | Cardiovascular inflammation | 3 | 0.1-10 mg/L | WB/S/P | 3 | 0.5-200 mg/L | WB/S/P |
| CRP | Inflammation | 3 | 2.5-300 mg/L | WB/S/P | | | |
| PCT | Sepsis | 12 | 0.1-100 ng/mL | WB/S/P | 12 | 0.1-100 ng/mL | WB/S/P |
| PCT Plus | | 12 | 0.02-50 ng/mL | WB/S/P | 12 | 0.02-50 ng/mL | WB/S/P |

* please check your local supplier for availability



Why to use:

Troponin I

- The preferred biomarkers for the evaluation of Myocardial Injury ¹
- “Rule out” acute myocardial infarction (AMI) with a single blood test ³
- Raising or falling patterns in serial testing are indication of Myocardial infarction(MI).
- Indicated to be tested multiple times at regular intervals. ¹

Soluble ST2 (sST2)

- Powerful prognostic marker for Heart Failure patients’ outcome. ⁴
- Help for risk stratifying post MI patients.
- Helps predicting therapy efficacy, particularly for antifibrotic drugs such as Nephrlysin Inhibitor. ⁵

D-Dimer

- Rule out suspected deep vein thrombosis (DVT) and pulmonary embolism (PE) ^{6, 7}
- Differentiate acute pulmonary thromboembolism and non-ST segment elevation myocardial infarction (NSTEMI) patients by combining D-Dimer and Troponin I tests ⁸
- D-Dimer based protocols have shown to be most cost-effective to rule out suspected pulmonary embolism ⁹

NT-proBNP

- High negative predictive value enables exclusion of heart failure in suspected patients, to triage quickly and appropriately ¹⁰
- Confirm the presence of heart failure, giving confidence to begin appropriate treatment immediately
- An alternative assessment to Cardiac echo, reducing pressure on waiting lists for ECG test, access to which is limited in many healthcare systems ¹¹
- Sensitive test enables diagnosis of systolic and diastolic ventricular dysfunction, even in mild and asymptomatic cases of heart failure ¹²

CK-MB

- Diagnosis of ACS and myocardial infarction (MI)
- CK-MB is indicative of reinfarction. ¹³
- Alongside with clinical risk scores, other biomarkers and ECG, it helps discriminate between takotsubo syndrome and MI. ¹⁴

Myoglobin

- Earliest marker to appear post-MI, in less than 2 hours after onset of chest pain
- Useful when the patient presents to physician very soon after onset of symptoms ¹⁵

CRP

- Future cardiac events are more frequent in patients with systemic inflammation, identified by high serum levels of C-reactive protein. ¹⁶
- Increases occur not only in infections, but also in the presence of systemic inflammation caused by myocardial infarction and other conditions.

PCT

- Differentiation of bacterial verses viral respiratory tract infection
- Determination of antibiotic treatment length in respiratory infections
- Diagnosis, risk stratification, and monitoring of sepsis and septic shock

